SCOPE

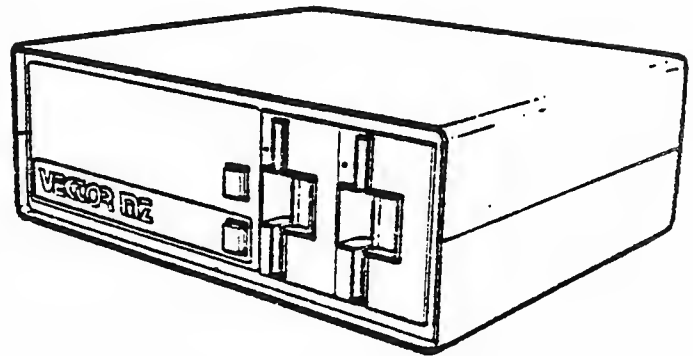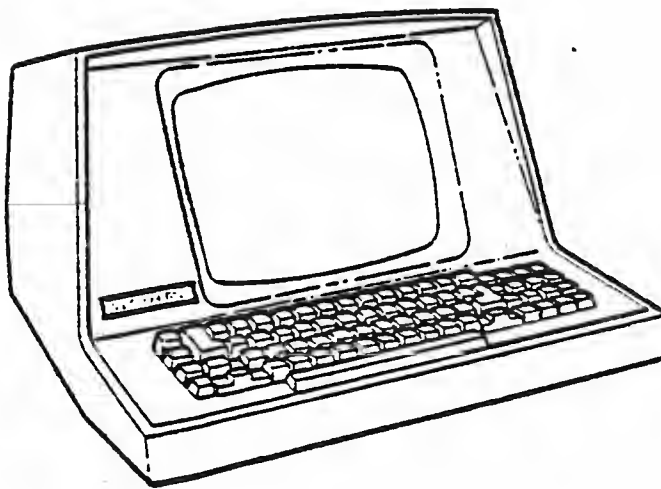## SCreen Oriented Program Editor

USERS MANUAL

VECTOR
VECTOR GRAPHIC, INC.

SCOPE - SCREEN ORIENTED PROGRAM EDITOR for CP/M

Version 1.6

REFERENCE MANUAL

Revision A

February 1, 1980

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FOREWORD

Audience

This manual is intended for programmers
and others with at least a moderate
technical knowledge of small computers
and computer programming.
It assumes the user is familiar with the
basic operation of the Vector Graphic
computer to be used, and is familiar
with the CP/M operating system.

Scope

This manual will describe the features
and commands of Vector Graphic's SCOPE -
Screen Oriented Program Editor - a complete
editor for CP/M program and data files.
Though it covers every aspect of the editor,
it is not intended as a training manual for
novice programmers.

Organization

Chapter 1 reviews the implications of
SCOPE in the context of the Vector computer
system and of the CP/M operating system.
Chapter 2 discusses the structure of the
editor in general. Chapter 3 and 4 give
each of the commands offered by SCOPE,
listing them alphabetically.

Vector SCOPE Reference Manual

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I. PERSPECTIVE

1.1 The value of SCOPE

Vector Graphic is proud to introduce SCOPE - Vector's Screen Oriented Program Editor. On Vector Graphic computers, it completely replaces and obsoletes ED, the original CP/M text editor. SCOPE is a major breakthrough in program editors for small computers, emulating the finest screen oriented text editors available on the largest systems. By making use of advanced word processing techniques centering around Vector's memory-mapped terminals, and by designing around the real minute-to-minute needs of professional programmers, Vector Graphic brings the best of both word and data processing to the job of program text generation.

The result is an editor that makes entering and editing program text a pleasure rather than a chore. Further, by considerably reducing the amount of time spent composing programs, SCOPE increases the value of any software written on a Vector Graphic system. SCOPE is therefore a major attraction in the use of Vector Graphic computers by dealers, software houses and OEM's wishing to write software.

Also, through the use of additional communications software, SCOPE can be used to generate text which is then transferred to a different computer system. This is an attractive alternative to mainframe and mini-computer users who need to offload jobs such as text editing which do not require the use of the larger but overburdened CPU. It is also an attractive technique for software houses preparing programs for other small computers which do not have editors as sophisticated as SCOPE.

1.2 The range of SCOPE

SCOPE is strictly for use on Vector Graphic computer systems. Further, it is only used in conjuction with the CP/M operating system, either CP/M 1.4 or Vector Graphic's implementation of CP/M 2. It cannot be used to generate MDOS BASIC text, OASIS text files, or Memorite 2 word processing text, for example, because these systems make use of incompatible operating systems though they run on Vector Graphic computers.

Within the world of CP/M, SCOPE can be used to create and edit any CP/M ASCII file, either program text files or data files. In the case of program text, it can be used as an alternative to the editors which are part of interactive languages such as BASIC. The programmer first creates the text file using SCOPE, saves it on disk using a file name recognizable by the language as a program text file, and then loads the file again using the language's editor. For example, Microsoft BASIC requires a file name of the sort <primary name>.BAS, where <primary name> can be any allowable CP/M primary name and BAS is the filetype.

Data files can be edited or entered using SCOPE just as easily, assuming only that the data is in normal ASCII code. For example, a Microsoft BASIC sequential file can be edited by SCOPE, but a Microsoft random access file cannot because it is in a compressed format. SCOPE is particularly useful for editing CP/M print files (those having PRN as a filetype) that have been generated by data processing software.

Four features of SCOPE make it so useful for editing any ASCII file:

(1) SCOPE offers "horizontal scrolling," in effect extending the width of the screen far beyond the physical limit of 80 characters. The maximum length of a line is 250 characters, allowing almost any disk record or any print output line to be viewed on one line on the screen.

(2) There is no limit, other than the limit of the disk, to the length of a file that can be edited using SCOPE. This is accomplished through a file-handling method that "rolls" long files through the text buffer.

(3) SCOPE displays ALL control characters (the 32 non-printing low-order ASCII characters). They appear on the screen as special characters whose shape is determined by the character generator PROM resident on the Flashwriter video board in the computer. Thus, any control characters appearing in a data file will appear literally on the screen rather than having some mysterious effect on the editor's operation. The only exception is that an ASCII CR (Carriage Return) character will not be displayed at all if it immediately precedes an ASCII LF (Line Feed) character. In order to enter control characters from the keyboard, SCOPE provides a Control Mode, in which letter keys and certain symbol keys generate the 32 low order ASCII characters.

(4) SCOPE does not insert any non-printing characters into the text, unlike word processing editors which may insert control characters for such purposes as causing underlined or bold-faced text.

.3 **Protocol used in this manual**

    <u>Underlined</u> material is material you have to type, except where underlining is <u>used for</u> emphasis. The use will be clear from the context.

    Material enclosed in angle brackets, such as <u><file name></u>, describes what is to be typed rather than giving it literally.

    Material enclosed in square brackets, such as <u>[N]</u>, is optional.

II. THE STRUCTURE OF SCOPE

2.1 Loading SCOPE

SCOPE is normally supplied on the serialized CP/M 2 diskette that comes when you order CP/M 2 or a system that includes CP/M 2. For those that already have CP/M, it is supplied on its own diskette. In either case, it is stored under the CP/M file name SC.COM. In order to load SCOPE, first boot up CP/M (either CP/M 1.4 or CP/M 2). Then, following the A> prompt, type:

SC <file name> <options>

Both the file name and the options are optional. If entered, the file name can include the filetype extension, and if desired it can include a disk drive designation using the standard CP/M format. If you do not enter a file name, you cannot enter any options. The file name specified when loading SCOPE is called the "load-file." Its name will appear at the top of the screen during the entire SCOPE session.

The options can be one or more of the following letters:

A   Reads in as much text as possible from the load-file into a RAM memory area known as the text buffer. It leaves 256 characters worth of empty space at the end of the text buffer in case you intend to add text. If the A option is not used, then the text buffer will be empty until the user types in material or reads in material from the disk using the Append command or Library command. Note that there is no point in using the A option if the load-file is a new file not already present on the disk.

H   Deletes the HELP screen from memory. The HELP screen is simply a chart which can be called onto the screen using the Help command which briefly explains all of the SCOPE commands. It occupies 1K of memory. If you delete it using the H option, then there will be an additional 1K to store text in the text buffer. Users who know the commands will find this desirable.

T   Turns on the Tab Mode. This is the same as using the the T option in the Tab command. The significance of the Tab Mode is explained in Section 2.5 below.

A typical example of the load procedure is the line:

A>SC DUMP.ASM AT

This starts up SCOPE, fills the text buffer with as much of the file DUMP.ASM as will fit, and turns on the Tab Mode.

2.2   Creating a new file

If you load SCOPE and include the name of a load-file that does not exist on the disk, then SCOPE will put that name on the disk. You can then type text. Unless you specifically request disk access, all text is typed into the RAM text buffer, enabling very fast operation. The buffer is very large.

If you exit from SCOPE using the Y option of the Quit command, SCOPE will automatically write the new material into the new file. Alternately, you can use the Write command during the session in order to write some or all of the new text into the new file.

If you load SCOPE and name a file, and then before you do any typing you realize that the name is not the one you wanted to use, you can erase it from the disk by immediately exiting from SCOPE using the "D" option of the Quit command.

.3 Editing an existing file

The information in this section is diagrammed a page ahead.

When loading SCOPE, if the load-file is the name of an existing file on disk, SCOPE immediately creates a new file having the same file name as the load-file, but having a file type of .$$$. In other words, if the load-file is X.Y, then after you load SCOPE, there will be two files on the disk: X.Y and X.$$$. The X.$$$ file is called the temporary-file. At the time of loading SCOPE, it holds no information. You do not have to read in text using the A option for this to take place.

If you <u>do</u> specify the A option when loading SCOPE, then as much of the existing load-file as possible will be brought into the text buffer automatically.

All typing and editing can now be done. This work effects ONLY the text buffer. In other words, it is done only in RAM, without accessing disk unless you, the operator, specifically requests disk access. This is possible because of the relatively large size of the text buffer.
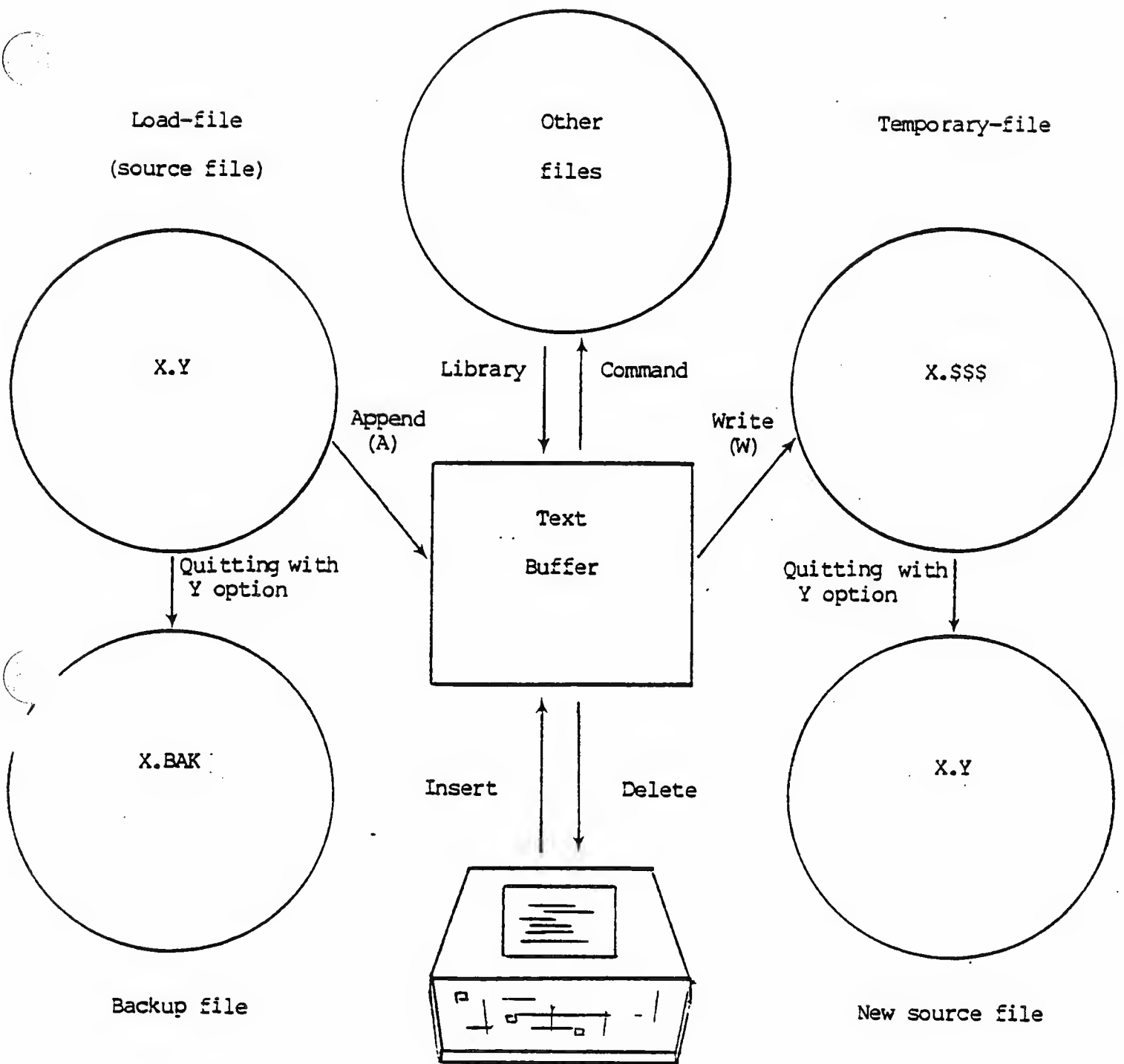
After you have completed adding to and editing the part of the load-file previously brought in, you can bring in more of it from disk using the Append command. You can use the Append command any number of times if desired. Alternately, you can use the Library command to bring in parts of other files in order to add them onto the material in the text buffer.

Further, you can use the Write command or the Transfer command to write some or all of the text buffer out to the temporary-file on disk, in order to make room for additional text in the buffer. The Write and the Transfer commands never write material into the original load-file, only into the temporary-file. You can also use the Library command to write material to disk files, though it is not as convenient if you only want to write to the <u>temporary-file</u>.

Finally, when you terminate the SCOPE session using the Y option of the Quit command, the following events take place automatically. All of the material in the text buffer is written into the temporary-file, adding it on to any material already written into the temporary-file through earlier use of Write or Transfer commands. Then, if any part of the original load-file had not been brought into the text buffer from the disk during the session, SCOPE moves that part of the load-file over to the temporary-file and tacks it onto the end of the material there. The result is that the temporary-file now contains the entire load-file, but reflecting any changes, additions, or deletions that took place during the session. The temporary-file is now the revised version of the load-file.

Assuming again that the Y option of the Quit command is executed, SCOPE then automatically changes the name of the original load-file into X.BAK. It then changes the name of the temporary-file from X.$$$ into X.Y, which was the name of the original load-file. In other words, the state of the load-file before any editing took place is preserved in the form of the X.BAK file, which is called appropriately the "backup" file. It can be reclaimed if necessary. The temporary-file, now called X.Y, is the newest version of the load-file.

Note: the first time in a session you use the Write or Transfer command to write material to the temporary-file, SCOPE will automatically erase the disk file having the name X.BAK, assuming X.Y is the name of the load file. In otherwords, the backup file is deleted to make room for the new temporary-file. Then when you exit, the load file becomes a new backup (.BAK) file.

Load-file   Other   Temporary-file

(source file)   files

```
        X.Y                                                     X.$$$
                     Library │  ↑ Command
                  Append     ↓  │              Write
                  (A)                          (W)
                         ┌──────────────┐
      │ Quitting with    │     Text     │      │ Quitting with
      ↓ Y option         │    Buffer    │      ↓ Y option
                         │              │
                         └──────────────┘
       X.BAK             Insert ↑  │ Delete            X.Y
```

Backup file   New source file

File handling when using a load-file

Figure 1

Note:

You may load SCOPE without specifying a load-file at all, as explained in Section 2.1. In order to edit a file, you would use the Append command to declare an "append-file" and to read the file into the text buffer. When you want to write some or all of that file out to disk again, you would use the Write command to declare or create a "write-file" and to write the material to that file. The append-file and the write-file cannot have the same name. Since an append-file and a write-file are only needed if you did not specify a load-file, the system will not allow you to declare them if you had declared a load-file.

When you exit from SCOPE, SCOPE will treat your declared append-file and write-file the same as it would treat a load-file and a temporary-file. All of the material in the text buffer will be written into the write-file, adding it on to any material already written earlier in the session. Then, any part of the append-file which had had not been read into memory previously will be moved over to the write-file as well. Thus the write-file will represent a completely edited version of the append-file.

What you give up by using append and write-files verses using a load-file is (1) when loading SCOPE, a file will <u>not</u> automatically be read into the text buffer and the system will <u>not</u> create a temporary-file (you <u>have to</u> specifically declare an append-file name and write-file name); (2) when you exit SCOPE, the system will <u>not</u> convert the original file into a backup file (having a filetype of .<u>BAK</u>); and (3) in rolling the text over from the append-file to the write-file, the name of the text in effect gets changed (in contrast, when using a load-file, the temporary-file <u>will</u> get changed into the same name as the original load-file automatically). In short, using a load-file is somewhat more convenient because it is more automatic.

The advantage of using append and write-files is that you have greater flexibility in the choice of names and what happens when you exit SCOPE.

.4 The text buffer

In a 56K system using CP/M 2, the text buffer can hold about 41K characters. In a 48K system using CP/M 2, it holds about 33K characters.

Only the characters showing on the screen, plus CR and LF characters, take up space in the buffer. Empty space at the ends of lines do not. As explained in the next section, some of the spaces within lines may also not actually take up space in the buffer.

Unlike a word-processor, there is no wrap around on the screen when you type to the edge of the screen. The screen shifts to the right allowing you to type up to 250 characters per line. If you reach the limit of 250 characters on a line, SCOPE will simply not accept any more material until you move the cursor to the next line. To provide additional flexibility, the control-D and control-G commands allow you to break a line into two lines, or to concatenate two consecutive lines into one.

2.5 Tab Mode

Tab Mode is produced by using the T option when loading SCOPE or when executing the Tab command. If you type text while the system is in the Tab Mode, groups of spaces typed in the middle of a line are replaced in the text buffer by Tab characters (09 Hex) whenever possible, <u>regardless of whether the TAB key was used while typing.</u> This reduces the required buffer space. As long as the system remains in Tab mode, the text looks on the screen the same as it did when you typed it in. In other words, tab characters are replaced by spaces on the screen.

The system follows a specific rule for substituting tab characters for spaces, and follows the same rule when displaying spaces on the screen. The rule is: a tab character replaces any group of spaces that stretches to a column which is an even multiple of 8. On the screen, a tab character causes spaces to appear on the screen from the location of the tab character to the next column whose column number is an even multiple of 8.

Notice that this is an apparent exception to the rule that all characters are displayed by SCOPE literally. However, you can cause the tab characters to be displayed literally simply by executing the C option of the Tab command, canceling the Tab mode. When you are not in the tab mode, any new spaces typed on the screen will be left in the text literally as spaces.

.6 CR and LF

It was mentioned in Perspective that a CR character (0D Hex) is not displayed if it immediately precedes a LF character (0A Hex) in memory. An LF character itself is not actually displayed, but it is the character which causes one line to end and another to begin on the screen. Its presence is thus obvious. As in CP/M files generally, LF is the standard line-end character. A CR preceding LF is considered optional. Note that when typing text, the RETURN key is the key which causes an LF to go into the text and moves the cursor to the beginning of the next line. The LF key simply causes the cursor to go to the beginning of the line.

In some languages such as BASIC, if an LF character appears in a program file within a string delimited by quote marks, the LF character does not cause a new line on the screen when the file is displayed by the language's own editor. This is not the case with SCOPE. SCOPE does not look for the quote marks. Any LF character causes the subsequent text to appear on the next line down.

2.7 Displayed control characters

So-called "control characters," which are the ASCII characters below 1F (Hex), that is the first 32 ASCII characters, do not have "official" ASCII visual representations. There are two different character sets offered by Vector Graphic, which differ solely in the visual characters representing the 32 control characters. One character set is called the "control" set, and the other is called the "graphics" set. The graphics set has been used on all new systems but is frequently replaced by the "control" set because the word processing software offered by Vector Graphic required it until about February, 1980. After this date, few systems will use the control set.

In the graphics set, an end-of-page or Form Feed character (ØC Hex) is represented by two small squares, one in the upper right hand corner and one in the lower left hand corner of the character. A CR character (ØD Hex) is represented by a white line along the bottom of the character and a white square in the upper right hand corner. A tab character (Ø9 Hex) is represented just by a white line along the bottom of the character. You will find a drawing showing the full graphics character set, including all 32 control characters, at the back of the Flashwriter II video board manual from Vector Graphic. A chart of all ASCII characters including control characters is found at the end of this manual.

You can type control characters directly into the text buffer and see them displayed literally on the screen by putting the system into the Control Mode, using the "U" command.

8 **Commands**

When you first enter SCOPE, the system is in the Command Mode. In this mode, almost every letter key on the keyboard causes a specific command to execute. Be careful not to start typing immediately because the first keys you press will not appear on the screen but will instead be interpreted as commands. You know the system is in Command Mode when the cursor is blinking and when the word "COMMAND" is displayed on the right side of the top line of the screen.

In order to type text you have to be in one of three other modes: Change Mode, Insert Mode, or Control Mode. You get into these modes using the "C", "I", and "U" commands respectively.

In addition to single key commands, there are "sub-commands." Sub-commands are initiated by holding down the CTRL (control) key while pressing one of the appropriate letter keys.

Commands are listed alphabetically in Chapter 3 and sub-commands are listed alphabetically in Chapter 4.

In this manual, all commands and sub-commands are designated with upper case letters. You may actually type them with lower or upper case letters, i.e. either not shifted or shifted. It makes no difference which.

SCOPE responds to many commands by displaying one or more questions on the top line of the screen. Also, the name of the command or the mode it results in is displayed on the right-hand corner of the screen. Altogether, the top line of the screen is known as the "command line."

When a command results in a series of questions, you may abort from the normal sequence at any time by depressing the DEL key, which will return the system immediatly to Command Mode. If a certain question may optionally be skipped by the user, then depress the RETURN key to go onto the next question if you do not want to answer it. If the question was actually essential, then SCOPE will respond by returning to command mode as if DEL had been depressed. When answering questions, sometimes multiple-character responses are required, such as line numbers or file names. In these cases, you may edit your responses using the left and right arrow keys to move the cursor, the BACK SPACE key to move the cursor over and erase the preceding character, and the space bar to erase a character. SCOPE will ignore extraneous leading and trailing blanks. If a numeral or a specific set of alphabetic responses is required, SCOPE will usually not accept any other responses.

When you have completed typing your response, depress the RETURN key to send it to SCOPE. Sometimes, SCOPE will refuse a response by displaying a ? character and giving you another chance. In this case, you have to delete the ? by typing a space or other charcter over it or back spacing over it.

If SCOPE cannot successfully execute a command, it will display an error message at the left of the command line. Depress the DEL key to return to Command Mode.

2.9 Moving the cursor

The cursor is the point of action within the text buffer. It is the point where new characters will be entered when you type.

The screen is like a window for viewing the text buffer. You can move the window for the purpose of viewing other parts of the text.

The current location of the cursor is always shown on the top line of the screen, showing both the line number and the column number.

You can move the cursor or move the window, or both, when you are in the Command Mode, and also when you are in the Change, Insert, or Control Modes. Anytime the cursor is visible on the screen, the cursor or the screen can be moved.

The four arrow keys move the cursor left, up, down, and right respectively. The TAB key causes more rapid movement to the right by jumping the cursor to the next tab location. The placement and changing of tab locations is discussed under the "control-T" sub-command in Chapter 3.

SCOPE works on the basis of 250 character length lines. Each character position is also called a "column." If you move the cursor to within 8 columns of the right edge of the screen and then continue moving it to the right, the screen window will begin shifting to the right as if pushed by the cursor. This is known as "horizontal scrolling." If you then move the cursor to the left again, when it reaches the left edge of the screen, the screen will begin shifting back to the left again. If a line is long enough so that some of it lies "hidden" to the right of the screen, this is indicated by a dash at the right edge of the screen on that line.

The LF key moves the cursor to the beginning of a line.

The RETURN key moves the cursor to the beginning of the next line. If the system is in Insert Mode, it also opens a space for a new line on the line that the cursor moves to. In other words, it inserts a line.

When you move the cursor to the bottom of the screen and then keep moving it down, it will push the screen window further down the buffer. The same is true moving the cursor up at the top of the screen.

In order to move the screen up or down to an entirely new block of text, depress the SHIFT key at the same time you press the up or down arrow key respectively. This is known as "screen scrolling."

To move the cursor quickly to the top of the screen or to the beginning of the text buffer, use the Beginning of Screen, Beginning of Text command. To move the cursor quickly to the end of the screen or to the end of the text buffer, use the End of Screen, End of Text command.

You can use the Jump command to move the cursor to a specific line by referencing that line's line number.

III. SCOPE COMMANDS

3.1 A — Append

Append brings material from the load-file into the text buffer.

It can also be used to bring in material from a file if you did <u>not</u> specify a load-file when loading SCOPE. In this case, SCOPE will immediately ask for the name of the desired file. This file then becomes the "append-file." If you then use the Append command again in the same session, SCOPE will assume you want to bring in text from the same append-file, and will not ask for another name.

The existence of an append-file and the existence of a load-file are mutually exclusive. If a load-file was specified when you loaded SCOPE, then when you use the Append command, SCOPE will <u>not</u> ask for the name of a file. In other words, you will not be given the chance to declare an append-file.

The differences between using a load-file and using an append-file during a SCOPE session are outlined in Section 2.3. An important point to remember is: If you declare an append-file (rather than using a load-file) and you want to save the edited file, you <u>must</u> use the Write command at least once during the session. This is necessary in order to declare a "write-file." You do not have to write <u>all of the text</u> out using the Write command because when you Quit from SCOPE, SCOPE will transfer all remaining parts of the append-file and the text buffer to the declared write-file as explained in Section 2.3.
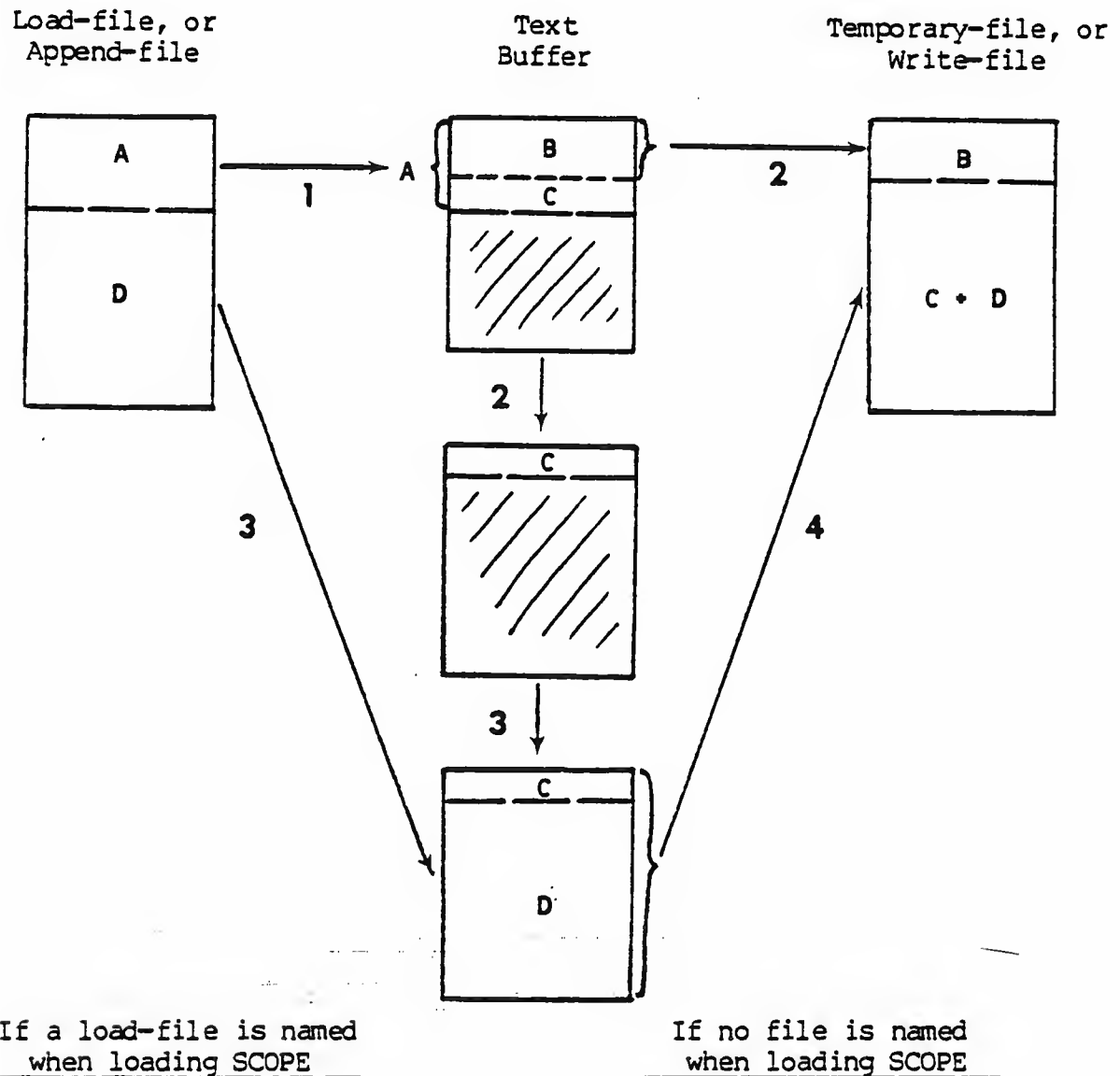
As part of the Append command procedure, SCOPE will ask for the "NUMBER OF LINES." You may either supply a number, or the letter A which stands for "all." A number will bring in only that number of lines. The letter A will bring in as much of the file as there is room for.

This is the key point: The Append command will bring in a block of text that begins at the <u>end</u> of the portion brought in the <u>last</u> time the Append command was used. This is true whether you use the A option or give a number of lines. In other words, the Append command always continues from where it left off the last time it was used. The text will be tacked onto the end of the text currently in the text buffer. Thus, you can use the append command to bring in parts of a file section by section. This concept is illustrated two pages ahead. If there is no space for this additional text, SCOPE will simply not read any text in at all.

Note: If you had read in part of the file earlier, the A option does <u>not</u> cause the original disk file to <u>replace</u> the edited material in the text buffer. The A option, just like asking for a desired number of lines, only brings in the <u>part</u> of the file which you had not <u>previously</u> brought in, and it <u>appends</u> it to the end of the material in the text buffer (assuming there is room).

To make room for more text, you can use the Write command to store some or all of the text onto the disk. The text will go into the temporary-file, or a named "write-file" if no load-file had been specified. The Write command takes text from the <u>beginning</u> of the text buffer and tacks it onto the <u>end</u> of the temporary-file or write-file. Therefore, the Write command and the Append command can be used together to "roll" text from the load-file or the append-file, through the text buffer, and out to the temporary-file or the write-file. This technique, used with files longer than the text buffer, is illustrated on the facing page. Note that the <u>Transfer</u> command is identical to a Write command followed immediately by an Append command using the same size block of text.

Note: When you execute the Append command, if all of the load-file (assuming there is one) had already been loaded into the text buffer, then SCOPE will not load anything. On the other hand, if you are using an append-file instead of a load-file, then SCOPE will ask for a new append-file name if all the material from the original append-file had previously been loaded into the text buffer. Thus, the only way to change the designated append-file is to first bring all of it into the text buffer either section by section or all at once using the A option explained below. Once it is all loaded, then you can change the designated append-file.

Figure 2

Use of the Append and Write commands, or the Transfer command

If a load-file is named
when loading SCOPE

If no file is named
when loading SCOPE

(1) Occurs while loading SCOPE.   First time Append command is used.
(2) First time Write command is used.   First time Write command is used.
(3) First time Append command is used.   Next time Append command is used.
(4)   Occurs when Quitting SCOPE if Y option is used.

The Transfer command can replace steps (2) and (3) if you want B to be the same
size as A.   (There would be no C.)

Procedure:

In Command Mode, depress A.

If you had declared a load-file when loading SCOPE, and you had previously read all of it into the text buffer, SCOPE will report "FILE IS CLOSED", and will not load any text. Depress DEL to return to Command Mode. Otherwise, if you had declared a load-file, skip to *.

If you had not declared a load-file, SCOPE will ask...

FILENAME-

Using CP/M format, type the full name of a file including filetype, if any, and including the disk drive letter if the file is not on the logged-in drive. Then depress RETURN. The name will appear on the command line and remain there until you return to Command Mode.

* SCOPE will then ask...

NUMBER OF LINES:

If you want to bring in all of the previously unread part of the file, or as much of it that will fit in the text buffer, type A. If you want only to bring in a certain number of lines, type the number. Then depress RETURN. The system will return to the command mode and the text will be in the buffer. If there was already some text in the buffer from the same file, then the new text will be found added on to the old text.

.2 B — Beginning of Screen, Beginning of Text

This command is used to move the cursor to the top of the screen in one motion, or to move the cursor along with the screen to the beginning of the text buffer.

Procedure:

When in Command Mode, depress B once to move the cursor to the top left-hand corner of the screen. Immediately depress it a second time to move the cursor and the screen to the beginning of the text buffer.

3.3 C - Change

When you execute the Change command, SCOPE goes into the Change Mode. In this mode, anything you type on the keyboard goes into the text buffer and onto the screen at the cursor location. Change mode is the mode in which you do all of your new text entry. You also use it for overtyping previously entered text.

If you type past column 72 on the screen, the screen will shift to the right allowing you to continue typing the line out to column 250.

In the Change Mode, the BACK SPACE key deletes the character to the left of the cursor and then moves the cursor one place to the left.

Procedure:

While in Command Mode, depress C. You will then be in Change Mode. You may begin to type immediately.

To return to the Command Mode, depress either DEL or control-X. DEL returns to command mode leaving all of the new material you have typed. Control-X deletes any changes you have made on the last line you were working on, unless you have moved the cursor past column 72. When the cursor is in column 73 or beyond, the screen scrolls horizontally, which causes all new material to become invulnerable to deletion by control-X.

.4 D — Delete

The Delete command deletes the character under the cursor and pulls in all following material on the same line. Since it is a command, you can only use this procedure when in the the Command Mode, not the Change or Insert Modes.

Procedure:

Move the cursor on top of the character you want to delete. Then, while in Command Mode, depress D. The character will be deleted and the rest of the line will move to the left one character.

3.5 E — End of Screen, End of Text

This command is used to move the cursor to the bottom of the screen in one motion, or to move the cursor along with the screen to the end of the text buffer.

Procedure:

When in Command Mode, depress E once to move the cursor to the bottom left-hand corner of the screen. Immediately depress it a second time to move the cursor and the screen to the end of the text buffer.

3.5a H – Help

Use this command in order to display a "Help Screen" – a list of all commands and sub-commands.

Note that the Help Screen will not come up if you included the H option when loading SCOPE.

Procedure:

While in Command Mode, depress H. The Help Screen will appear. To return to Command Mode, depress DEL.

3.6 I - Insert

Depressing the I key puts SCOPE into the Insert Mode. Similar in many respects to the Change Mode, you can type new material into the text buffer when in the Insert Mode. The difference is that the material is _inserted_ into the line at the cursor location, pushing the following material on the line further to the right. When the line reaches 250 characters in length, no additional material can be inserted on that line.

In Insert Mode, the BACK SPACE key not only deletes the character to the left of the cursor and moves the cursor to the left, it also pulls in all following material as the Delete command does. This enables you to "back out" material you have inserted.

In Insert Mode, the RETURN key not only returns the cursor to the beginning of the next line, but opens up a new blank line at that spot. In other words, it allows you to insert a line just below the current location of the cursor.

Procedure:

Move the cursor to the location at which you want to insert text. Then, while in Command Mode, depress I. You will then in be in the Insert Mode. You can begin typing material and watch as it is automatically inserted. You can also move the cursor anywhere else within the text buffer and continue inserting.

To return to Command Mode, depress DEL.

.7 **J - Jump**

This moves the cursor to a specific line number. It is used if the line is a long distance from the current location of the cursor. If you do not know the number of the line to which you want to move the cursor, first use the Number command to display the line numbers.

Procedure:

After you depress the J̲ key in Command Mode, SCOPE will ask you...

LOCATION:

Enter the number of the desired line. Then depress RETURN. The cursor will move to that line and SCOPE will return to the Command Mode.

3.8 K - Kill

This kills (deletes) the line on which the cursor lies, and moves all following text up one line.

Procedure:

First, move the cursor onto the line to be deleted. Then, in Command Mode, depress K. The line will be deleted.

L - Library

The Library command is used to read and write material from/to any disk file
(not just the declared load-file or append-file). It can be used at any time
during a SCOPE session.

The Library command differs from the Append and Write commands in the
following ways: (1) The disk file to be used is specified anew each time the
command is used, and thus it can be different each time. (2) It allows you to
insert material read from a disk file into the middle of the text buffer,
rather than at the end as with the Append command. (3) It allows you to read
text from the middle of the disk file, rather than only from the end as with
the Append command. (4) It enables you to write out a portion of text from the
middle of the text buffer, whereas the Write command can only take text out
from the beginning of the text buffer. (5) Unlike the Write command, it does
not delete the written material from the text buffer.

The Library command is mainly used to build up text from sections of other
files. For example, you can bring in sections of several files on disk and
insert them in various places in the middle of the existing text in the text
buffer. Alternately, you can build up a new disk file by writing out various
sections of the existing text buffer.

Procedure:

After you depress the L key while in Command Mode, SCOPE will ask...

FILENAME-

Type the name of the desired disk file (the one you want to read from and/or
write to). If the file does not exist on the disk, SCOPE will create it.
(Clearly you will not be able to read any material from such a new file until
you write something into it.) Then depress RETURN as usual to send the name to
SCOPE.

SCOPE will then ask...

WRITE SECTION:

If you only want to read material from a disk file, then depress RETURN immediately. Otherwise, type an answer using one of the following formats:

WRITE SECTION: <start line number> <end line number>[N]

or

WRITE SECTION: A[N]

The start and end line numbers specify the block of text which you want to write from the text buffer into the specified disk file. You must separate the two numbers by a space. If you use an A instead, then the entire text buffer will be written to the disk file.

The N is optional. Without the N, SCOPE will append the given block of text onto the end of the specified file. With the N, SCOPE will first erase the declared file and then put the given block of text in its place on the disk, using the same name. Obviously, use the N option with great care.

After typing and editing your response, depress RETURN.

SCOPE will then ask...

READ SECTION, PLACEMENT:

If you only want to write material, then depress RETURN immediately. Otherwise, type an answer using one of the two following formats:

READ SECTION, PLACEMENT: <start disk line number> <end disk line number> [<start text line number>]

or

READ SECTION, PLACEMENT: A [<start text line number>].

The first two line numbers specify the block of text in the disk file that you want to read in. Using an A instead tells SCOPE to read in as much of the disk file as possible. The <start text line number> is optional. If you include it, the text will be inserted into the text buffer following the given line number. If you do not include it, the text will be appended to the end of the text buffer. You must type a space between each of the items in your response.

After typing and editing your response, depress RETURN.

Unless you were writing to a new file, SCOPE will then ask...

ERASE FILE (Y,N):

Answer N if you do not want to erase the specified file from the disk, and answer Y if you do want to erase it. Normally, the only time you would want to erase the file is if you had created it earlier only for the purpose of transfering text from one place to another.

When you depress RETURN after the last answer, SCOPE will return to the Command Mode.

3.10 M — Move

Move is used to move a block of text from one place in the text buffer to another, or to duplicate a block of text at another location in the buffer. Line numbers are used to specify the block of text and the destination location.

Procedure

If necessary, use the Number command to display line numbers. Then, in Command Mode, depress M. SCOPE will ask...

SOURCE SECTION, DESTINATION:

The format of your response must be as follows:

SOURCE SECTION, DESTINATION: <begin line> <end line> <destination line>.

<Begin line> and <end line> are the beginning and ending line numbers of the block of text to be moved or duplicated. <Destination line> is the line number of the line where the material will be inserted. The material will always be inserted before the specified destination line, and then the following material will be automatically renumbered.

The destination line cannot be between the begin line and the end line.

After you depress RETURN, SCOPE will move the text. Then, it will ask...

REMOVE SOURCE (Y/M):

If you answer Y, the source block of text will be deleted, leaving the copy at the destination location. This is how you "move" text.

If you answer N, the block of text will be left at both the original and destination locations, thus duplicating it.

After typing your response, depress RETURN, which moves the text and returns the system to Command Mode.

.11 N — Number

The Number command causes all line numbers to appear on the screen if they are not already there. If there are already there, it makes them disappear. Line numbers are not actually part of the text, and SCOPE will not allow you to type over them.

Procedure:

In Command Mode, depress N.

3.12 O — Open

The Open command opens up a blank line above the line on which the cursor lies. The line on which the cursor lies will be moved down, and it and the following lines will automatically be renumbered. It is used for inserting new lines.

Procedure:

Move the cursor to the line before which you want to insert a new line. Then, in Command Mode, depress the letter O.

.13 P — Print

The Print command prints some or all of the text buffer. The CP/M operating system must have been previously configured for printing.

Printing options are (1) you can print any desired vertical strip out of the text buffer. In other words, the left edge of the printed material can begin at any desired column in the text, and you can print any desired number of columns. There is no printer wrap-around. Material is printed exactly how it appears on the screen, out to the specified number of columns. Lines which are too long are simply not printed in entirety. (2) You can also limit printing to a block of text betwen any two lines. (3) The printing of line numbers is optional. If included, they take up 5 characters out of the specified number of columns to be printed.

Procedure:

After you depress P while in Command Mode, SCOPE will ask...

LINE SECTION:

Your response must be in one of the following formats:

LINE SECTION: <start line number> <end line number>[N]

or

LINE SECTION: A[N]

The two line numbers specify the block of text to be printed. They must be separated by a space. If you type an A instead, SCOPE will print the entire contents of the text buffer. The N is optional. If you type it, SCOPE will print line numbers, in the same format as when displayed on the screen in response to the Number command.

After you depress RETURN, SCOPE will ask...

WIDTH:

Normally respond by typing the width of your printer, in terms of the number of columns. If you depress RETURN without making a numerical entry, SCOPE will assume you want to use the same width as the last time you executed the Print command. The first time you use the Print command in a session, SCOPE will assume a width of 80 if you give it no numerical width.

The answer you give to the WIDTH question simply determines how many columns to print. You can specify any value for WIDTH, down to 1 if desired. If a line has too many characters, the excess ones will not be printed. (They will not get wrapped around to the next line on the printer.) After you depress RETURN again, SCOPE will ask...

FIRST COLUMN:

Your numerical answer specifies which column in the text will be the left-hand column of the printout. If you simply depress RETURN without entering a value, SCOPE will assume you want to print beginning with the first character of each line. Together, WIDTH and FIRST COLUMN give you the ability to print any vertical strip out of the text buffer.

After you depress RETURN, SCOPE then will ask...

PAGED (Y/N/T)?

Your answer must be in the format:

PAGED (Y/N/T)? <Y or N or T>

These options have the following meaning:

Y	SCOPE will print 56 lines per page, and skip to the top of each new page. It does not stop at the end of each new page; it assumes you are using fan-fold paper or a cut-sheet feeder.
N	SCOPE will print the text without breaking at the at the end of each page. It assumes fan-fold paper. If you had specified the paging option when running the CP/M CONFIG utility, you should use the N option of the SCOPE Print command, because CP/M will handle the line counting.
T	The same as Y, plus it form-feeds to the top of the first page before beginning to print.

After you type your response and depress RETURN, printing will begin. To abort printing at any time, depress DEL.

3.14 Q - Quit

The Quit command returns the system to the CP/M executive, ending the SCOPE session. When you depress Q while in the command mode, SCOPE will display the question EXIT SYSTEM (Y/N/D/X/H/R)   You may enter any of these letters and then depress RETURN to carry out the command. The letters have the following meaning:

Y
This is the normal exit from SCOPE. It carries out all of the file completing and backing up as described in Sections 2.2 and 2.3 of the previous chapter. If you had named a load-file when loading SCOPE, then after exiting with the Y option, there will be a file on the disk by the same name and containing all the changes and new material entered during the session. If the load-file had existed before entering SCOPE, then the original version of that file will still be on the disk, but now having the filetype .BAK.

N
This aborts the Quit command and returns you to the SCOPE Command Mode.

X
This exits SCOPE and returns to the CP/M executive without doing anything to the files on the disk at the moment of exiting. Do not use this option unless you know exactly what you are doing. The temporary file (if there is one) will not be updated with the latest changes in the text buffer, and the temporary file will still have the filetype .$$$. The X option is useful for experimenting with SCOPE to find out exactly what the disk directory looks like at any given time.

D
This exits from SCOPE and returns all files to the conditions existing before you loaded SCOPE, with the exception that any new files created by means of the Library command will remain. The temporary-file, if any, or the Write-file, if any, will be erased.

(continued)

H   This is the same as Y except that if a load file had
been used in the SCOPE session, SCOPE will be
reloaded automatically instead of returning to CP/M.
The new version of the load-file will become the new
load-file in the new SCOPE session. Further, as much
as possible of that file will be read into the text
buffer as if you had loaded scope using the A option.
If a load-file had not been used in the previous SCOPE
session, then H causes a normal exit to CP/M.

R   This is the same as Y, but in addition it
causes the system to reload SCOPE automaticaly.
Unlike the H option, no files are loaded and all files
previously declared (the load-file, append-file, and
write-file) are <u>undeclared</u>. The R option is like
reloading SCOPE with no load file specified.

Procedure

In Command Mode, depress <u>Q</u>. You will then be asked...

<p align="center">EXIT SYSTEM (Y/N/D/X/H/R):</p>

Depress one of the desired letters, and then the <u>RETURN</u> key.

.15 R — Remove

The Remove command removes (erases) a section of text. You will specify the section by giving the starting and ending line numbers. After execution, all following lines will be squeezed up and automatically renumbered.

Procedure:

Depress R while in command mode. SCOPE will ask...

LINE SECTION:

Respond in the following format:

LINE SECTION: <start line number> <end line number>

The two line numbers specify the block of text to be deleted. They must be separated by a space.

You can use the Remove command to delete a specific line, by giving the same line number for both the start and the end line number.

3.16 S — Search and Replace

This command is used either to search for a given string of characters without replacing it with something else, or to replace one or more occurrences of the searched string with a different string. You can choose to "globally" replace all occurrences of the string, or to individually view and select which occurrences are replaced. Further, you can limit the range of the search to an area between any two lines and between any two columns. There are a few other options which will be apparent below.

Procedure

Depress the S key while in Command Mode., SCOPE will ask...

SEARCH STRING:

Respond by typing the string you want to search for. It can be as much as 60 characters long. If you want to include leading and/or following blanks within the string, then begin and/or end the string with a slash in order to delimit the desired spaces. In other words,

SEARCH STRING: port

will cause a search for the string "port", which can be the word "port" or part of another word such as "reporting." However, if you enter

SEARCH STRING: / port /

then only the word "port" will qualify, because the following and leading blanks are included in the specified string.

If you wish a "/" itself to be part of the search string, then simply type two slashes in a row. For example,

SEARCH STRING: //*

will search for the pair of characters "/*".

Within the search string, a ? character has the roll of a "wild-card" character. For example, if you search for "p?rt", "port", "part", and "pert" will all qualify.

After you correctly enter and edit the desired search string, depress RETURN.

The next question to appear will be...

REPLACE STRING:

If you depress RETURN in response to this question, then SCOPE will assume that you want to search without replacing. Otherwise, type the string you want to replace the search string with. It can be up to 60 characters long as well. If you want to replace the search string with nothing – in other words, simply eliminate occurrences of the search string – then use // as the replace string. Just as with the search-string, you can use / to delimit the ends of the replace string, particularly if you want to include leading or following blanks.

After correctly entering and editing the desired replace string, depress RETURN again.

SCOPE will then display...

ENTER OPTIONS (P,L,B,C):

You may respond by entering any combination of these letters, or none at all. The letters have the following meaning:

P   This causes SCOPE to pause on every occurrence of the search string if you specified a replace string. At each occurrence, you will then have the option to replace it with the replace string, or not, as desribed below.

There is no need to use the P option if you are just doing a search without replace because in this case SCOPE will always pause at each occurrence.

L   Use the L option to inform SCOPE that you want to limit the search to a range of lines and/or a range of columns. SCOPE will then ask you for the desired range(s), as desribed below.

B   This causes SCOPE to accept both upper and lower case letters as valid occurrences of the search string in the text buffer. In other words, if your search string is "Port," then "PORT," and "port" will each qualify as occurrences of the search string.

C   This causes the search to begin at the current location of the cursor. Otherwise, the search will begin at the beginning of the text.

After typing the desired options, depress RETURN. If you had entered the L option, you will then be asked two additional questions... .

LINE LIMITS:

and

COLUMN LIMITS:

In each case, enter two numbers, separated by a space, according to the following formats:

LINE LIMITS: <start line number> <end line number>

COLUMN LIMITS: <left-hand column number> <right-hand column number>

The two line numbers limit the search, or search and replace, to a range between and inclusive of the two lines.

The two column numbers limit the search, or search and replace, in the same way, between and inclusive of the two columns specified.

After typing each response, depress the RETURN key.

You may limit the search both by lines and by columns, or only by one of them. To ignore one of the qestions, just depress RETURN without making an entry. For example, if your entries are;

LINE LIMITS: <depress RETURN>

COLUMN LIMITS: 20 40 <depress RETURN>

then SCOPE will assume you want to search all lines but limit the search between columns 20 and 40.

After all questions are answered and terminated with RETURN, the system will return to the Command Mode. If you had provided a replace string and did not use the P option, then SCOPE will automatically find and replace all occurrences of the search string, within the line, column, and cursor location limits, if any.

If you did not provide a replace string, then the SCOPE will move the cursor to the first occurrence of the search string (within the line, column, and cursor location limits, if any). You can then move it to the next occurrence (within the same limits) by depressing control-A (meaning "advance").

If you provided a replace string and used the P option, then SCOPE will move the cursor to the first occurrence of the search string (within the limits specified, if any). At this time, depress control-A to advance the cursor to the next occurrence, without replacing it. Otherwise, depress control-S (meaning "select") to replace the first occurrence of the search string, and then move on to the next occurrence. For each occurrence of the search string, you can use either control-A to pass it, or control-S to replace it. In summary:

control-A   Advances to next occurrence without replacing.

control-S   Replaces the occurrence with the replace string.
                   (i.e. "select" it.)
                   If there is no replace string, then it functions
                   like control-A.

Once you have gone through the Search and Replace procedure once within a SCOPE session, the specified strings and parameters remain active until the next time you use the Search and Replace command in the same session. At any time while in the Command, Change, Insert, or Control Modes, you can depress control-A or control-S to continue searching or searching and replacing.

Note: When Tab Mode is active, SCOPE internally expands each line before it searches that line. After replacements, if any, are made in that line, SCOPE then compresses the line again using tab characters. Thus, you do not have to worry about searching for tab characters if there are spaces in your search string.

3.17 **T - Tab**

The Tab command controls whether or not the system is in the Tab Mode, and whether or not it is in the Automatic Indent Mode.

Tab Mode:

In this mode, SCOPE will replace typed spaces with ASCII tab characters whenever possible. This replacement process will take place as you type. It does not affect spaces that had been typed before you put the system in the Tab Mode. However, when you are in Tab Mode, if you make <u>any</u> changes to a line, the line will be compressed using tab characters, as if you typed the line in from scratch.

Tab Mode is used to save space in the text buffer and in the disk file, if you are not required for any reason to have all spaces represented by ASCII space characters (20 Hex). Note that some of the printer drivers provided by Vector Graphic do not initialize the printer to accept tab characters, but other of the printer drivers do. You will have to test the printer to see if it can print a file that has embedded tab characters.

So long as the system remains in the Tab Mode, SCOPE does not display a tab character on the screen literally, but places onto the screen the same number of spaces as it removed when it originally put the tab character into the text.

SCOPE knows how many spaces to display for each tab character in the text because the same rule is used for removing spaces as is used for displaying them. Specifically, a tab character replaces any group of spaces that stretch to the next even multiple of 8 column. Changing tab stops with the control-T command does not affect this rule.

Note: Tab Mode is <u>not</u> used to set tab stops. For this, see the control-T sub-command in Chapter 4.

Automatic Indent Mode:

In this mode, SCOPE automatically moves the cursor to the first tab stop every time you depress <u>RETURN</u>. This tab stop can either be the first default stop (column 8) or can be set using the control-T command. The LF key will always return the cursor all the way to column 1.

Procedure:

After you depress $\underline{T}$ while in the Command Mode, you will be asked...

ENTER OPTION(S) (T,C,I,N):

Type one or more of these letters, and these press <u>RETURN</u>. It does not matter if there are spaces between them. The letters mean:

T   Activates the Tab Mode.

C   Cancels the Tab Mode. If there were any Tab charcters in the text, you will immediately see them displayed on the screen. In most systems, they appear as bold white lines at the bottom of the character position.

        Important: Option C also deletes all user-defined tab stops and restores the default tab stops at every eighth column.

I   Activates the Automatic Indent Mode.

N   Deactivates the Automatic Indent Mode.

3.18 U — Enter Control Mode

Depress U while in the Command Mode in order to enter the Control Mode. Control Mode is the same as the Insert Mode, but with one major difference. Every key on the keyboard produces ASCII characters between 00 Hex and 1F Hex, the so-called "control characters."

The correspondence between particular keys and particular codes will be found in the ASCII chart at the end of this manual. Looking at that chart, the keys in any of the three right-hand pairs of columns will produce the corresponding ASCII character in the left-hand pair of columns. You will find it most convenient to use letter keys to produce the control characters. In fact, each of the control characters is often designated by the letter that can be used to generate it. For example control-M is 0D Hex.

There are a few special points to be aware of. First, the J key will produce the control-J character which is the LF (Line Feed) character. Since this is interpreted by SCOPE as an end-of-line indicator, it will split the line on the screen. You will not see the second half of the line appear until you move the cursor off the line. Second, the CR character (control-M) will not be displayed at all if it precedes an LF character. This is due to the fact that many programs that generate text use both CR and LF together to indicate an end of line, and we do not want the CR characters cluttering up the screen. Third, there is no way to generate the SUB character (control-Z or 1F Hex).

Procedure

In Command Mode, depress U.

.19 W — Write

Write is the reverse of the Append command. It writes all or part of the text buffer to a disk file. If a load-file was declared at the time of loading SCOPE, then Write will automatically write the text to the temporary-file. Otherwise, the first time you use the Write command in a SCOPE session, it will ask you for the name of a file. This file then becomes the declared "write-file." The next time you use the Write command in that session, it will assume you want to write again to the same file. There is no way to declare a different write-file in the same session. If you want to write to a different file, use the Library command.

The Write command deletes from the text buffer the section of text written to the disk. For example, if you specify that it write out the first 50 lines of the buffer, then those first 50 lines will be deleted from the buffer, and all the following lines will be renumbered beginning at 1. This enables you to then append to the end of the text buffer additional text (from the declared append-file or from the load-file) using the Append command. Further, the Write command appends the text to the end of the designated disk file, rather than writing over it. In short, the Write command followed by the Append command enable you to roll a file that is longer than the text buffer from the disk through the text buffer and out to the disk again with great ease.

Procedure:

Depress W while in the Commands Mode.

If you had declared a load-file when loading SCOPE, skip to *.

If you had not declared a load-file, SCOPE will ask...

FILENAME-

Using CP/M format, type the full name of a file including filetype, if any, and including the disk drive letter if the file is not on the logged in drive. The file cannot be the same as the declared append-file. Then depress RETURN. The name will appear on the command line and remain there until you return to Command Mode.

SCOPE will then ask...

NUMBER OF LINES:

Type a number or type A. A number tells SCOPE how many lines from the beginning of the text buffer to write out. An A means write out the entire text buffer.

3.20 X - Transfer

The Transfer command is exactly the same as doing a Write command followed by an Append command using the same number of lines for each. In a single command, it allows you to roll a section of the text buffer out to the declared write-file or temporary-file and to roll in the same number of lines from the declared append-file or load-file.

In order to transfer text using the load-file and temporary-file, you must have declared a load-file when loading SCOPE.

If you did not declare a load-file, then Transfer will use the declared write-file and append-file. Therefore, if you had not declared a load-file, you cannot use the Transfer command until you have used both the Write and the Append commands once.

Note that the Transfer command only rolls text through the buffer in the forward direction. It cannot read from the declared write-file or temporary-file nor write to the declared append-file or load-file.

Procedure:

During Command Mode, depress the X key. SCOPE will then ask for...

NUMBER OF LINES:

Enter the desired number of lines to read and write, or depress A to roll the entire text buffer out and to read in as much as possible. Then depress RETURN to execute the command.

3.21 Y — Clear/Delete to beginning of line

This command operates on the line that the cursor is on. In Command Mode, when you depress the Y key, it clears the line up to and including the character under the cursor. If you then depress the Y key again before doing anything else, it moves the remaining portion of the line to the left edge of the screen, squeezing out the blank space. If you continue pressing Y, it merely removes the first character from the line and moves the line over one more space.

Procedure:

In the Command Mode, depress Y once to clear to the beginning of the line. Depress it again to squeeze the line up.

3.22 Z - Clear to end of line

This command operates on the line the cursor is on. It deletes all the text to the end of the line beginning with and including the character under the cursor.

Procedure:

In the Command Mode, depress Z̲.

IV. SUB-COMMANDS

Sub-commands are the commands that are initiated by depressing a letter key while holding down the CTRL key. They are not necessarily subsidiary to single-key commands. Unlike single-key commands, they can be used when the system is in Change Mode, Insert Mode, or Control Mode, as well as Command Mode.

4.1 Control-A — Advance Search and Replace

When you depress control-A, SCOPE advances the cursor to the next occurrence of the previously declared search string, without replacing it with the replace string, if there is one. See Search and Replace for more discussion.

Procedure:

In Command Mode, Change Mode, Insert Mode, or Control Mode, depress control-A to advance the cursor as described above.

4.2 Control-C - Toggle Insert and Change Modes

If you are in the Insert Mode, this will switch the system to the Change
Mode, and if you are in the Change Mode, this will switch the system to the
Insert Mode. It is more convenient during rapid editing then returning to the
Command Mode with the DEL key and then entering the other desired mode.

Procedure:

To go directly from the Change Mode to the Insert Mode, in order to insert
characters, depress control-C.

To go directly from the Insert Mode to the Change Mode, also depress
control-C.

.3 Control-D — Break Line

This will split a line into two lines. It operates upon the line on which the cursor lies. The second line will begin with the character under the cursor. All following lines will be renumbered.

Procedure:

In Command Mode, Change Mode, Insert Mode, or Control Mode, depress control-D in order to split the line on which the cursor lies.

4.4 Control-F - Fold Upper/Lower Case

Control-F converts characters on the same line as the cursor from lower to upper case or from upper to lower case. When the cursor is in any given position, the first time you depress control-F the characters following the cursor, including the one under the cursor, will be converted to upper case. Upper case characters will remain upper case. If you depress control-F again without doing anything else, it will convert the same characters to all lower case.

Procedure:

When in Command Mode, Change Mode, Insert Mode, or Control Mode, move the cursor to the desired position on the desired line, then depress control-F. All characters following the cursor including the one under it will convert to uppper case. If you press it again immediately, they will all become lower case, even if some were upper case originally.

If you want to convert just one character in the middle of a line to upper case, leaving the rest of the line lower case, first move the cursor on top of that character and then depress control-F. Then move the cursor one character to the right and depress control-F twice. This will convert the rest of the line back to lower case.

1.5 Control-G — Append Next Line

This command combines two consecutive lines into one. Specifically, it takes the line which follows that of the cursor and appends it on to the end of the cursor's line. All following lines are renumbered automatically. If the two lines total more than 250 characters, then it lops off extra characters at the end. Lopped-off characters are lost.

Procedure:

You can be in Command Mode, Change Mode, Insert Mode, or Control Mode. Move the cursor to the first of two consecutive lines that you want to merge into one. It does not matter where on the line the cursor lies. Then depress control-G.

4.6 Control-L - Delete Help Screen

This command is used to add 1 K (about 1000 characters) to the size of the text buffer during any one SCOPE session. This is accomplished by deleting the contents of the Help screen from memory. Once executed, you will not be able to view the Help screen during that session.

Procedure:

In Command, Change, Insert, or Control Mode, depress <u>control-L control-L.</u> You have to depress it twice without doing anything in between, in order for it to take effect.

To renew the Help screen, you have to Quit and reload SCOPE.

4.7 Control-N — Save Single Line

Control-N allows you to store any one line in a temporary memory buffer area, so that that line can later be inserted other places in text. It does not erase the line, only copies it into the special buffer. It is more convenient than the Move command if you want to move or repeatedly insert just one line. Control-V is the command which inserts the stored line back into the text buffer.

Note: If the text buffer is totally filled, you will lose the use of the control-N command. This is due to the fact that the special buffer used by the control-N command is used to store normal text if there is no other space available.

Procedure:

In Command, Change, Insert, or Control Modes, move the cursor to the line you want to save. The cursor can be anywhere on the line. Then depress control-N.

If SCOPE displays the message "LINE/MEMORY FULL", this means that you have lost the use of the control-N command as explained above.

4.8 Control-S — Select for Replacement

This command is only used if you had previously specified a replace string using the Search and Replace command. Control-S replaces the present or nearest occurrence of the specified search string by the replace string. If the cursor is sitting directly at an occurrence of the search string, then that will be the occurrence which is replaced. The cursor will then move to the next occurrence.

If you use control-S without specifying a replace string, it functions just like control-A, simply advancing the cursor to the next occurrence.

Procedure:

In Command, Change, Insert, or Control Modes, depress control-S to replace the present or nearest occurrence of the declared search string, and then move the cursor to the next occurrence.

1.9   Control-T   —   Toggle Tab

This creates a tab stop at the cursor location if there was no stop there previously. If there _was_ a tab stop at that point, it deletes it. The first time you use control-T, it deletes all of the default tab stops. The default tab stops are at every column which is an even multiple of 8. To restore the default tab stops, use the C option of the Tab command.

Use the TAB key to move the cursor from one tab stop to the next.

You can set a maximum of 20 tab stops at any one time.

Procedure:

In Command, Change, Insert, or Control Modes, move the cursor to the column desired for placement of a tab stop. It does not matter what line you do this on. Then depress control-T.

4.10 Control-V — Insert Saved Line

Control-V will insert at the cursor position the line previously saved using control-N. It inserts the entire line, so that it does not matter where on the line the cursor lies. The line on which the cursor lies will be moved down, and it along with all following lines will be renumbered automatically. The saved line is still saved and can be inserted again elsewhere.

Procedure:

In Command, Change, Insert, or Control Modes, move the cursor onto the line at which you want to insert the saved line. Then depress control-V. The line will be moved down and the saved line will be inserted.

If you get the error message "LINE/MEMORY FULL", this means there is no room in the text buffer for the inserted material.

1.11 Control-X - Cancel and Return to Command Mode

Control-X returns the system to the Command Mode from any other Mode, just like the DEL key. In additon, it deletes any new material you may have typed onto the line where the cursor lies, assuming you have not moved the cursor off the line and assuming the screen has not been horizontally scrolled. As soon as you move the cursor off the line or horizontally scroll the screen, new text is accepted into the text buffer so that control-X cannot cancel it.

Procedure:

In Change, Insert, or Control Modes, depress control-X to return to Command Mode and cancel new material on the current line.

V. ERROR MESSAGES

Error messages will be displayed on the left side of the command line. The following are all the error messages that SCOPE will display, along with their explanations and suggested remedies.

FILE NOT FOUND

The file name you entered was not found on drive A, or on the designated drive if you had designated a different drive.

Check the spelling, drive designation, and which diskette is in the drive.

READ MATCHES WRITE

You specified the same file name on the same drive for both the append-file and the write-file.

Change one of the two names or use two separate diskettes.

DIR/DISK SPACE ERROR

The disk is filled.

Use a different diskette, or use the Library command to delete one or more files from the diskette.

WRITE/EXTEND ERROR

Something is wrong with the directory of files on the disk. This only can occur when writing to the disk, not when reading. It does not indicate there is anything physically wrong with the disk.

First try again. If no success, use the Library command to create a new file and write the text out to it.

FILE IS CLOSED

You tried to read from a load-file after you have already read in all of it.

Check that you did what you intended to do. If you want to read from the load file after having read all of it, then use the Library command.

LINE/MEMORY FULL ERROR

A search and replace operation caused a line to exceed 250 characters in length. The attempted insertion was not executed. This message will also occur when using the control-N command if there is no space available to store a line temporarily.

You can continue the search and replace with a control-S, or do anything else if desired. To make the insertion into the line which caused the error, first split the line using control-D. Then move the cursor to the line and try the control-S (select) command again.

If you got the message in response to the contrl-N command, you can create more space by deleting some material from the text. Otherwise, you cannot use the control-N command.

BAD TEXT FILE

This occurs if you try to read a file which SCOPE cannot handle because the end-of-file character is not 1A Hex as SCOPE expects.

If you actually want to read that file, you can use other CP/M utilities to insert a 1A Hex at the end of it.

PERMANENT DISK ERROR

This indicates there is something physically wrong with the disk or with the disk drive. It may be transient or permanent. It will also occur if you designate drive C or drive D in a file name entry and you only have two drives in the system.

First, check that you did not specify drive C or D in the file name. Then, try the operation again. If the same error occurs, try reseating the diskette in the drive. Then try using a different drive unit. As a last resort, try copying the file or the diskette using CP/M utilities.

DRIVE SELECT ERROR

You used a drive designator (as part of a file name) that the disk controller board does not recognize. You will not get this error if you use C or D as the drive designator, even if you do not have such drives, because the controller board is equipped to handle four drives.

Check your file name entry.

DRIVE IS READ ONLY

You tried to write to a disk that has a write-protect tab on it.

Check whether you want to do the operation, or remove the write protect tab.

FILE IS READ ONLY

You tried to write to a file that is write-protected by CP/M. The ability to write-protect a file is a CP/M 2 feature.

If you want to carry out the operation, return to CP/M using the X option of the Quit command. Then use CP/M commands to unprotect the file. Then, return to the Systems Monitor and warmstart SCOPE by typing G0100.